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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,200	02/17/2004	James A. Springer	TUC920030181US1	1755

35825 7590 02/17/2006

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EXAMINER

MOAZZAMI, NASSER G

ART UNIT PAPER NUMBER

2187

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/781,200		SPRINGER ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Nasser G. Moazzami		2187	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-22 is/are allowed.
- 6) ☒ Claim(s) 1,2,23 and 24 is/are rejected.
- 7) ☒ Claim(s) 3,4,25 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/17/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. Information Disclosure Statement submitted by applicant on 02/17/2004 has been considered by examiner. See attached PTO-1449.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Ng (US Patent No. 5,623,608).

As for claims 1, and 23, Ng discloses a method for initializing a storage controller, comprising: commencing an initial microcode load (IML) operation; commencing background staging of copy state data tracks from a disk storage device to a memory device; receiving a request to access a track of copy state data; if the requested track of copy state data has been staged, accessing the requested track of copy state data; if the requested track of copy state data has not been staged: issuing a wait command in response to the request to access the track of copy state data; staging the requested track of copy state data; revoking the wait command; and accessing the

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requested track of copy state data; completing the staging of the copy state data tracks; and completing the IML [fetching and pre-fetching of data based on first data access request (DAR); next DAR during the pre-fetching; testing to determine whether the requested data block is in pre-fetching range and if it is, wait for completion of the pre-fetching; and buffer memory hit after the pre-fetching completed (column 7, line 67 through column 8, line 43)].

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ng in view of Fuld (US Patent No. 5,867,685).

As for claims 2, and 24, Ng discloses the claimed invention, but fails to specifically teach initializing a parameter in a field of the tracks of copy state data to a first state when the IML is commenced; and changing the state of the parameter of a track to a second state when copy state data is staged to the memory device.

Fuld discloses maintaining an entry in the cache for each track, wherein the entry includes a field for the state of the track. The state field is being used to detect the sequential accesses and wherein the state of the track can be set to different values in

order to detect the correct status of the access, and whether to pre-fetch or not, so that the system performance will be improved [column 1, lines 8-11 and column 2, lines 43-62].

Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the current invention to include a directory with a data structure having the state of the track therein in order to detect the correct status of the access, and whether to pre-fetch or not, so that the system performance will be improved.

#### ***Allowable Subject Matter***

6. Claims 3-4, and 25-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5-22 are allowed.

#### ***Conclusion***


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser G. Moazzami whose telephone number is (571) 272-4195. The examiner can normally be reached on 7:00AM-5:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**NASSER MOAZZAMI**  
**PRIMARY EXAMINER**  
02/07/2006